

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

Set 36, No. 9

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2003 European Patent Office. All rts. reserv.

00888158

COMPOSITE REVERSE OSMOSIS MEMBRANE AND METHOD OF REVERSE OSMOTIC TREATMENT OF WATER USING THE SAME

VERBUNDMEMBRAN FÜR UMKEHROSMOSE UND METHODE ZUR WASSERBEHANDLUNG MIT UMKEHROSMOSE MIT HILFE DERSELBEN

MEMBRANE D'OSMOSE INVERSE COMPOSITE, ET PROCEDE DE TRAITEMENT DE L'EAU PAR OSMOSE INVERSE A L'AIDE DE LADITE MEMBRANE

PATENT ASSIGNEE:

NITTO DENKO CORPORATION, (301875), 1-2, Shimohozumi 1-chome Ibaraki-shi, Osaka 567, (JP), (applicant designated states: DE;FR;GB;IT)

INVENTOR:

HACHISUKA, Hisao, Room No. 501, Ranburasu Saga, 9-1, Setogawacho, Sagatenryuji, Ukyo-ku,, Kyoto-shi, Kyoto 616, (JP)  
IKEDA, Kenichi, 218-21, Aojicho, Kusatsu-shi, Shiga 525, (JP)

LEGAL REPRESENTATIVE:

Schwarzensteiner, Marie-Luise et al (78601), Grape & Schwarzensteiner Patentanwälte Sebastiansplatz 7, 80331 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 888810 A1 990107 (Basic) ✓

WO 9734686 970925

APPLICATION (CC, No, Date): EP 97907348 970317; WO 97JP856 970317

PRIORITY (CC, No, Date): JP 9661477 960318; JP 96102657 960424; JP 96112542 960507

DESIGNATED STATES: DE; FR; GB; IT

INTERNATIONAL PATENT CLASS: B01D-069/02; B01D-069/12; B01D-071/56; B01D-061/02;

ABSTRACT WORD COUNT: 117

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

| Available Text                     | Language  | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A                           | (English) | 9901   | 527        |
| SPEC A                             | (English) | 9901   | 4968       |
| Total word count - document A      |           |        | 5495       |
| Total word count - document B      |           |        | 0          |
| Total word count - documents A + B |           |        | 5495       |

...SPECIFICATION acetate. On the other hand, reverse osmosis composite membranes, in which an active thin film substantially having a selective separation property is formed on a microporous support film, are known as reverse osmosis membranes having a different structure from the asymmetric reverse osmosis membranes.

Presently, a number of such reverse osmosis...

...amine and polyfunctional alicyclic acid halide has a negative charge due to the residual carboxylic acid. The membrane surface having negative charge adsorbs, for example, cationic fouling substances, decreasing the flux. Therefore, a membrane has been required that is neutral in charge and has a high water permeability and a high salt rejection.

#### Disclosure of Invention

It is an...were added to an aqueous solution containing 3.0 wt.% of m-phenylenediamine and 0.15 wt.% of sodium lauryl sulfate was contacted with a microporous polysulfone support film for several seconds, and the excess solution was removed to form a layer of the solution on the support film.

Next, the...were added to an aqueous solution containing 3.0 wt.% of

m-phenylenediamine and 0.15 wt.% of sodium lauryl sulfate was contacted with a **microporous** polysulfone support film for several seconds, and the excess solution was removed to form a layer of the solution on the support film.

Next, the...

...was set in a flat membrane cell, and water obtained by filtering general domestic waste water containing 1 ppm of a surfactant with a water **MF** filter was pressure circulated at a pressure of 15 kgf/ ...were added to an aqueous solution containing 2.0 wt.% of m-phenylenediamine and 0.15 wt.% of sodium lauryl sulfate was contacted with a **microporous** polysulfone support film for several seconds, and the excess solution was removed to form a layer of the solution on the support film.

Next, the...